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Ref:DV129-01
April 18, 2001


TO: Environmental Quality Council, Capitol Building, Helena, 59620-1704
Dept. of Environmental Quality, Metcalf Bldg., PO Box 200901, Helena, 59620-0901
Montana Fish, Wildlife & Parks: Director's Office - Rich Clough; Fisheries Division - Karen Zackheim; Legal Unit
MT Historical Society, SHPO, 225 North Roberts, Veteran's Memorial Building, Helena, 59620-1201
Montana State Library, 1515 East Sixth Ave., Helena, 59620-1800
Jim Jensen, Montana Environmental Information Center, PO Box 1184, Helena, 59624
George Ochenski, PO Box 689, Helena, 59624
Wayne Hirst, Montana State Parks Foundation, PO Box 728, Libby, 59923
Montana State Parks Association, PO Box 699, Billings, 59103
Joe Gutkoski, President, Montana River Action Network, 304 N 18th Ave., Bozeman, 59715
Rep. Rod Bitney, PO Box 10501, Kalispell, 59904-3501
Rep. Paul Sliter, PO Box 118, Somers, 59932
Rep. Roger Somerville, PO Box 1104, Kalispell, 59903
Rep. Verdell Jackson, 555 Wagner Lane, Kalispell, 59901-8079
Sen. Bob DePratu, PO Box 1217, Whitefish, 59937-1217
Sen. Arnie Mohl, 3303 Hwy 2 E, Kalispell, 59901
Rep. Stanley Fisher, 76 Golf Terrace Drive, Bigfork, 59911-6252
Sen Bob Keenan, Box 697, Bigfork, 59911-0697
Rep. Sylvia Bookout-Reinicke, PO Box 327, Alberton, 59820-0327
Sen. Jim Elliott, 100 Trout Creek Road, Trout Creek, 59874-9609
Rep. Allen Rome, 748 Dana Lane, Garrison, 59731-9737
Sen Tom Beck, 792 Yellowstone Trail, Deer Lodge, 59722-8704
Flathead County Commissioners, 800 S Main, Kalispell, 59901
Flathead County Library, 247 First Avenue E, Kalispell, 59901
Stan Frasier, Montana Wildlife Federation, PO Box 1175, Helena, 59624
Janet Ellis, Montana Audubon Council, PO Box 595, Helena, 59624
Arlene Montgomery, Friends of the Wild Swan, PO Box 5103, Swan Lake, 59911
Warren Illi, Flathead Wildlife, Inc., PO Box 4, Kalispell, 59903
John Winnie, Trout Unlimited, PO Box 638, Kalispell, 59903-0638
Jim Mann, The Daily Inter Lake, PO Box 7610, Kalispell, 59904
Bob Raney, 212 S. 6th, Livingston, 59047
Bill Reynolds, Engineering, Recreation, Lands Staff Officer, Lewis & Clark NF, 1101 15th St N, Great Falls, MT
Dale Luhman, FNF, 8975 Hwy 2 E, Hungry Horse, 59919

Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) has been prepared for the use of motorized equipment in the Bob Marshall and Great Bear wildernesses for westslope cutthroat restoration in headwater lakes.

Questions and comments will be accepted through Friday, May 18, 2001. Please direct your questions or comments to Grant Grisak, Fisheries Biologist, FWP, 490 N. Meridian Road, Kalispell, MT 59901, or e-mail to ggrisak@state.mt.us.

Sincerely,


Dan Vincent
Regional Supervisor

DV/nli
Enclosure

Draft

MEPA/NEPA/HB495 GENERIC CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action: Use of motorized equipment in a wilderness area.
2. Agency Authority for the Proposed Action: Fish, Wildlife & Parks.
3. Name of Project: Use of helicopter and outboard motor in the Bob Marshall and Great Bear wildernesses for westslope cutthroat restoration in headwater lakes.
4. Name, Address and Phone Number of Project Sponsor (if other than the agency):

5. If Applicable:

Estimated Construction/Commencement Date: October 2001

Estimated Completion Date: October 2006

Current Status of Project Design (% complete):

None of the proposed 10 wilderness lakes have been treated to date (Devine Lake is the only lake that has been treated in the wilderness, and was completed in 1994).

6. Location Affected by Proposed Action (county, range and township):

Bob Marshall Wilderness: The lakes in this area are located in the Swan Mountain Range and drain into the South Fork Flathead River from the west. The general legal description is T20N, R15W, S numerous.

Great Bear Wilderness: Moose Lake is located at T28N, R14W, S16 and Marion Lake is located at T29N, R16W, S20. Marion Lake drains into the Middle Fork Flathead River from the west and Moose Lake drains into the river from the east.

7. Project Size: Estimate the number of acres that would be directly affected that are currently:

(a) Developed:
residential __ acres
industrial __ acres

(b) Open Space/Woodlands/
Recreation __ acres

(c) Wetlands/Riparian
Areas __ acres

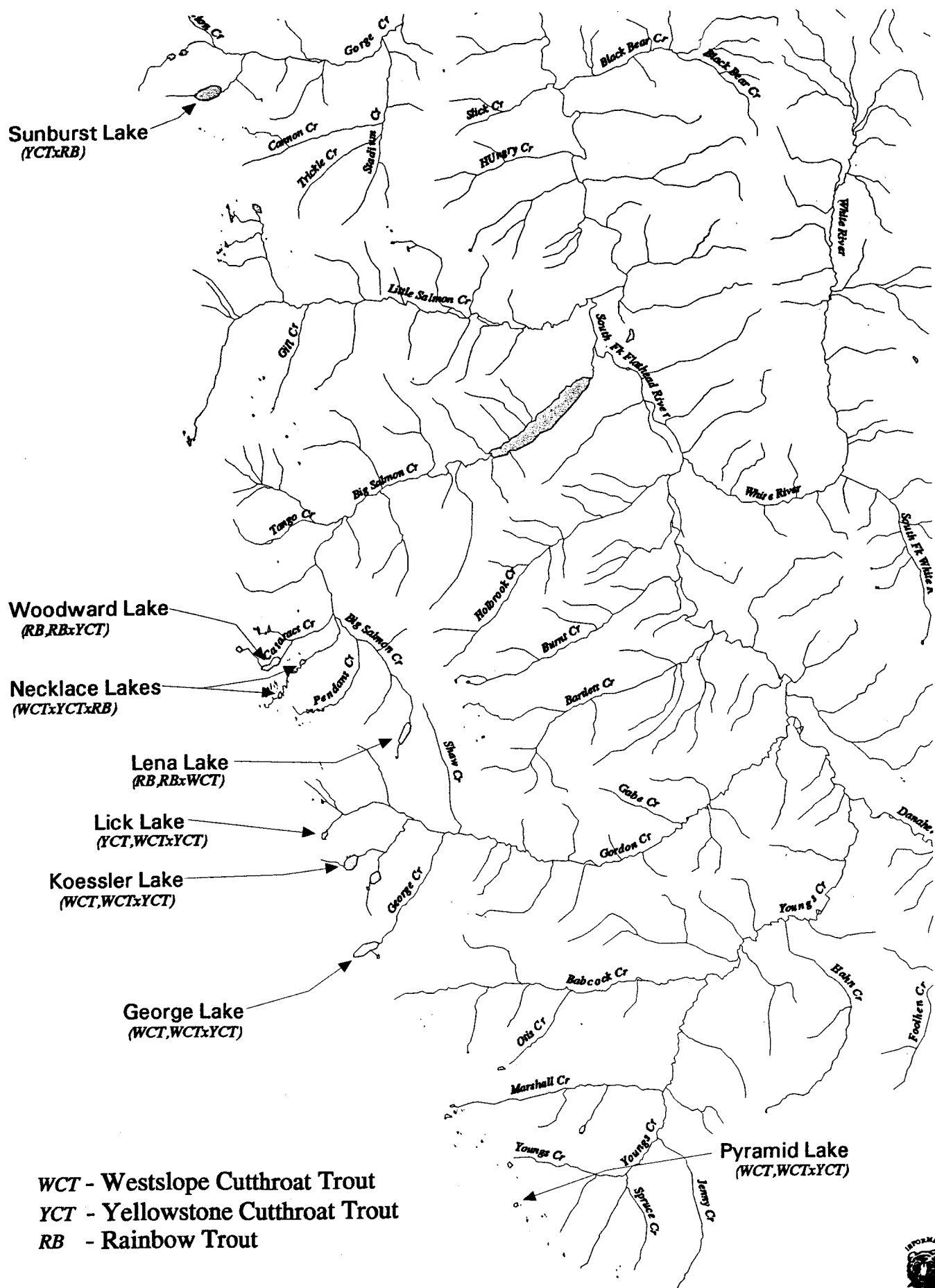
(d) Floodplain __ acres

(e) Productive:
irrigated cropland __ acres
dry cropland __ acres
forestry __ acres
rangeland __ acres
other __ acres

8. Map/site plan: Attach an original 8 1/2" x 11" or larger section of the most recent USGS 7.5' series topographic map showing the location and boundaries of the area that would be affected by the proposed action. A different map scale may be substituted if more appropriate or if required by agency rule. If available, a site plan should also be attached.

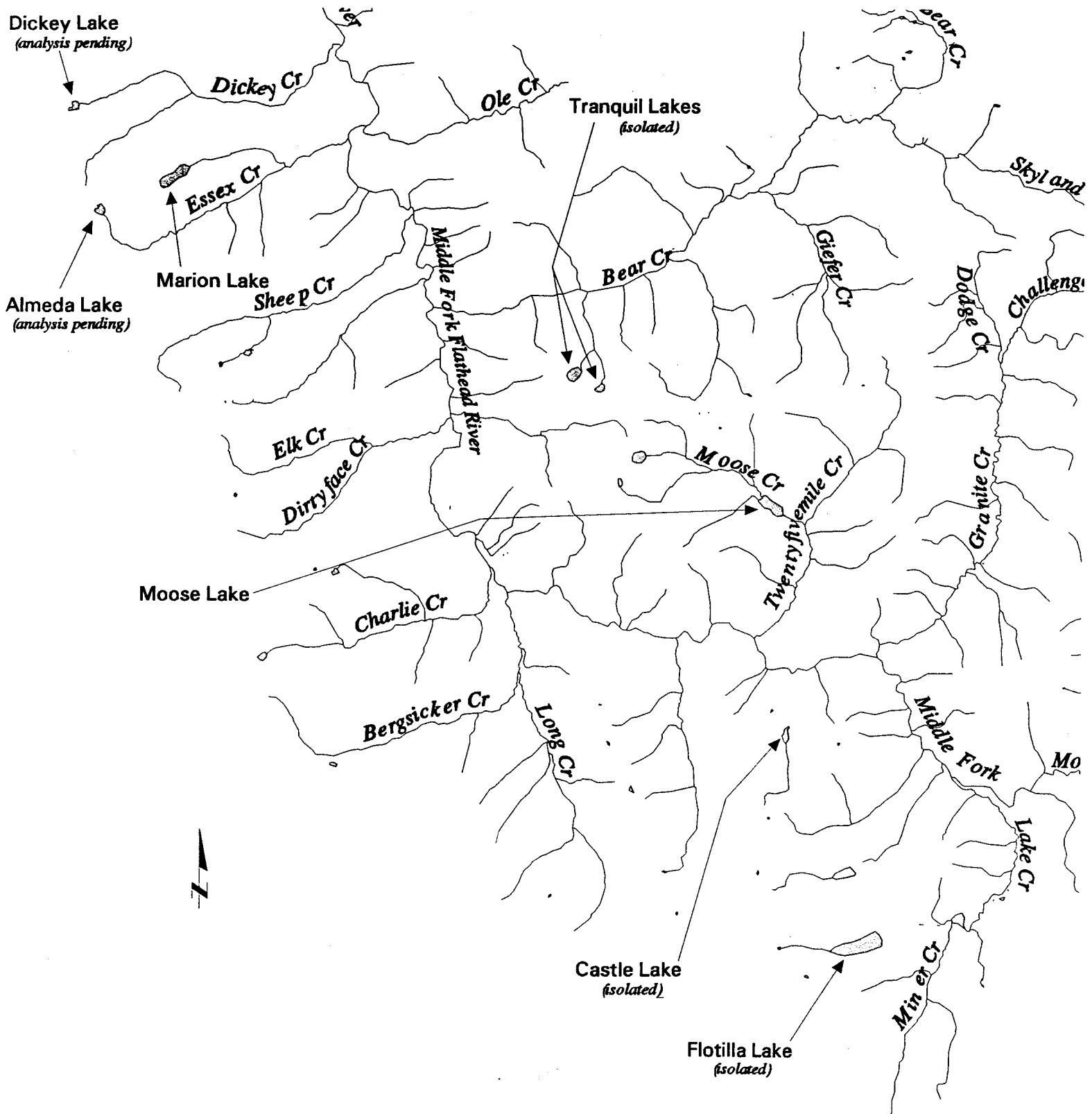
Bob Marshall Wilderness Complex - South Fork Flathead River

Lakes With Exotic Fish



Great Bear Wilderness - Middle Fork Flathead River

Lakes With Exotic Fish



Montana Fish,
Wildlife & Parks

9. Narrative Summary of the Proposed Action or Project Including the Benefits and Purpose of the Proposed Action:

Proposal and Justification

This is an assessment to consider the impacts associated with using motorized equipment in the Bob Marshall and Great Bear wildernesses. The proposal is to use a helicopter and marine outboard motor to transport and apply fish toxicant (rotenone) to remove exotic trout populations in specific lakes. The proposed alternatives of using livestock and no action are discussed in Part II of this document.

In 1995 the Fish, Wildlife and Habitat Management Framework for the Bob Marshall Wilderness Complex document, hereafter referred to as the "framework document", was finalized. It intended to "...provide a collective vision of how to manage the resources in the complex..." In the early 1980s FWP identified problems with exotic trout in the Great Bear and Bob Marshall portions of the complex. The agency sought ways to correct the problem using the least intrusive means to preserve the wilderness values of the complex. A program called "swamping" was instituted to remove exotic fish by stocking high densities of genetically pure fish in lakes with hybrid populations. Likewise, exotic trout in the lakes threaten genetically pure populations downstream of them. This program is largely responsible for the language used in Section IV, Item 13a, of the framework document. Follow-up genetic sampling indicated that over a 16-year period the lake populations have not responded favorably to the less intrusive method of swamping. Some populations have demonstrated depressed growth from high density stocking. Based on this finding FWP concluded that a more decisive method of eliminating exotic trout would be necessary to preserve the native westslope cutthroat trout in the complex.

The use of fish toxicant to manage fish in the wilderness is considered under Section IV, Item 13, of the framework document. The circumstances include "...protection or reestablishment of species that aid in maintaining the wilderness values...", of which westslope cutthroat trout are a vital component. Further discussion on fish toxin for management will be addressed in individual EAs and will describe the specific needs for each lake.

Because the lakes in the complex are located in rugged mountainous terrain with limited access, FWP is proposing to access them with a helicopter. This will facilitate the treatment process and reduce the intrusion time. FWP is also proposing to use a motorized boat to administer and mix the chemical. In compliance with Section IV, Item 15a, of the framework document, the scenarios provided in Parts I and II of this document will identify the scope and magnitude of the proposed action versus the alternatives.

Current Programs Complimentary to the Proposed Action

In 1999 FWP began a program to progressively eliminate exotic trout from headwater lakes in the South, Middle, and North Fork Flathead drainages using fish toxin. Tom-Tom Lake, which lies outside of the Bob Marshall Wilderness but within the South Fork Flathead drainage, was treated in 2000. Whale Lake in the North Fork Flathead drainage was also treated. These lakes will be restocked with genetically pure westslope cutthroat trout in 2001. There are 12 additional lakes in the South Fork, located outside of the complex, which will be treated intermittently over an 8-year period. In an effort to preserve one segment of the values of the complex (i.e. native westslope cutthroat trout), FWP has prioritized wilderness lakes to be addressed first and will phase in the nonwilderness lakes intermittently throughout the 8 year time span.

This action is consistent with maintaining and restoring the genetic purity of westslope cutthroat in the Flathead Basin. By doing so, FWP is complying with the Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana (1999). In addition to the other signatories, including the USFS, FWP has accepted the goals of the plan and is striving to implement recovery and restoration efforts as defined in objectives 1,2, and 3 of the conservation and restoration goal identified on page 2 of the MOU.

History and Justification for the Proposed Action

Most of the lakes that have been treated with rotenone in the Flathead Basin are accessible by road. Those in remote areas have been accessed by helicopter. For example, in 1999 FWP used a helicopter to lift a boat and equipment into Hidden Lakes on the Little Bitterroot River in order to treat them. Hidden Lakes are situated in a canyon and are accessible only by trail. During this project the helicopter transported equipment and two personnel at 10:00 a.m., the treatment was conducted, and all were airlifted out at 1:00 p.m. In 2000 FWP used a helicopter to lift a boat and equipment into Whale Lake and Tom-Tom Lake in order to treat them. Whale Lake was treated in two hours. Tom-Tom required about 5 hours, mostly because of the installation and monitoring of drip stations. Helicopters used for these projects were a Bell 206 and Hughes 500, which ferried up to 1000 pounds of equipment with each trip. Likewise the helicopters easily transported the cumbersome 14-foot aluminum boat with an outboard motor, which facilitated applying and mixing the rotenone quickly. Limited access, quantity of materials needed, and being located in rugged mountainous terrain preclude using conventional methods to access the proposed wilderness lakes.

Using a rigid-hull boat and outboard motor provides the safest and most efficient means of administering this type of treatment. A rigid-hull boat can hold nearly 600 pounds of rotenone, equipment, and personnel during an application. The outboard motor provides a timely application. When retrofitted with a venturi mechanism it provides the necessary suction to distribute and mix the rotenone at depths up to 100 feet.

Helicopters have a demonstrated efficiency to access lakes in remote, rugged mountainous terrain, to carry large loads of materials and supplies, and they easily transport the outboard motor and boat (to administer chemicals expeditiously and efficiently). It is the preferred method for projects involving limited access.

Goals

The goals of this project are:

1. Preserve the genetically pure fluvial and adfluvial westslope cutthroat trout populations in the South Fork Flathead drainage as per the Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat in Montana (MFWP 1999).
2. Remove exotic trout that threaten genetically pure stocks of westslope cutthroat.
3. Restock treated lakes to:
 - a. Establish pure cutthroat populations over the anticipated few remaining hybrid fish.
 - b. Provide genetically pure fish to seed creeks downstream of the lakes.
 - c. Eliminate the potential for illegal introduction.
 - d. Maintain angling opportunities.

Scope of the Project

There are 10 lakes in the Bob Marshall Wilderness with exotic trout; they are George, Koessler, Lick, Lena, three of the Necklace lakes, Pyramid, Sunburst, and Woodward (Table 1).

There are 6 lakes in the Great Bear Wilderness that are known to have populations of exotic trout (Table 2), and two others that are not confirmed. Exotic trout from Moose and Marion lakes pose an immediate threat to genetically pure westslope cutthroat populations in the Middle Fork Flathead drainage. Castle, Flotilla, East Tranquil, and West Tranquil lakes also contain exotic trout, but these populations are believed to be isolated by subsurface outflow or other water flow restrictions that may prevent fish from exiting the lakes. FWP will continue to evaluate these lakes over the next few years. Empirical information suggests that Almeda and Dickey lakes may contain exotic trout, but analyses are still pending. At this time the proposal is to treat Moose and Marion lakes during the proposed time frame for the Bob Marshall lakes. Upon confirmation of threatening exotic trout populations in the other Great Bear Wilderness lakes, they would be phased into the treatment schedule.

Table 1. Lakes in the Bob Marshall wilderness with exotic trout that are proposed for reclamation.

<i>Lake</i>	<i>Size (acres)</i>	<i>Fish Species</i>
George	114.2	W, Y, WxY
Koessler	81.5	W, WxY
Lick	19.0	W, Y, WxY
Lena	74.2	W, R, WxR
Necklace -lower	13.8	WxYxR
Necklace -middle lower	3.7	WxYxR
Necklace -middle upper	9.5	W, WxYxR
Pyramid	8.9	W, WxY
Sunburst	148.3	YxR
Woodward	65.0	R, RxY

W = westslope cutthroat, Y = yellowstone cutthroat, R = rainbow, x represents a hybrid cross

Table 2. Lakes in the Great Bear Wilderness with confirmed populations of exotic trout that are proposed for reclamation.

<i>Lake</i>	<i>Size (acres)</i>	<i>Fish Species</i>
Marion	68.7	WxYxR
Moose	60.4	WxR

W = westslope cutthroat, Y = yellowstone cutthroat, R = rainbow, x represents a hybrid cross

Time Frame and Cost

The anticipated time frame for the wilderness component of the project is 5 years (Table 3) if a helicopter is used. This would be expanded to nearly 10 years if livestock were the transport method used. The timeframe may vary due to unforeseen setbacks or other modifications. For example, treating the three Necklace lakes at one time could shorten the project. Other considerations include reclaiming populations using a "drainage recovery" approach and staggering the lakes by size to defray the high cost of treating multiple large lakes in one year.

The estimated cost for labor and helicopter to access the proposed wilderness lakes is \$26,905 (Table 3). This rate is approximately \$21/acre for helicopter and \$18.80/acre labor with a helicopter.

Table 3. Treatment schedule and estimated cost by method to transport materials to the proposed wilderness lakes.

Year	Lakes Inside Wilderness	Estimated Livestock Cost	Estimated Labor with Livestock	Estimated Helicopter Cost	Estimated Labor with Helicopter
2001	Pyramid	3,987	1,949	188	167
2002	Woodward	29,120	14,235	1,374	1,222
2002	Lick	8,512	4,161	401	357
2003	Necklace(3)	12,096	5,913	888	507
2003	George	51,161	25,009	2,414	2,146
2004	Lena	33,241	16,249	1,568	1,349
2004	Koessler	36,512	17,848	1,723	1,532
2004	Moose	27,059	13,227	1,277	1,135
2005	Sunburst	66,438	32,477	3,135	2,788
2005	Marion	30,777	15,045	1,452	1,291
		298,903	146,113	14,420	12,494

proposed
alternative

A Likely Scenario Involving the Proposed Method

Lena Lake was chosen to demonstrate the logistics and cost involved in treating it using a helicopter versus livestock to transport the materials. It was selected because it is slightly greater than the estimated mean volume of all 10 lakes (3060 AF) and requires slightly more trail miles to access than the mean trail distance into the 10 lakes (14 miles). It is believed to be representative of the average size and distance from a trailhead for all lakes involved.

Lena Lake is located 17 trail miles from the Owl Creek trailhead. The estimated volume of Lena Lake is 3600 AF, which would require approximately 1200 gallons (11,400 pounds) of liquid rotenone to treat. Transporting with a helicopter would require approximately 15 trips into the site including 10 trips for chemical, 1 trip for boat and supplies, and 4 trips for personnel (Table 4). Each round trip would be about 23 minutes making the estimated total airtime 5.5 hours. At the rate of \$296 per hour this would total \$1,628. The lake could be treated in one day, with a second day to clean up, and would require 4 personnel at a total cost of \$1,400. The environmental impacts related to air transport are minimal. Ground disturbances to the lakeshore will be isolated to a small overnight camp area and a staging area for equipment.

Table 4. Estimated travel scenario, flight time, and equipment transport necessary to chemically treat Lena Lake using a helicopter.

<i>Trip</i>	<i>Destination</i>	<i>Time</i>	<i>cargo</i>
1	Owl Creek to Lena Lake	11 minutes	2 fisheries personnel
2	Lena Lake to Owl Creek	11 minutes	Out
3	Owl Creek to Lena Lake	11 minutes	Boat and equipment
4	Lena Lake to Owl Creek	11 minutes	Out
5	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
6	Lena Lake to Owl Creek	11 minutes	Out
7	Owl Creek to Lena Lake	11 minutes	2 fisheries personnel
8	Lena Lake to Owl Creek	11 minutes	Out
9	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
10	Lena Lake to Owl Creek	11 minutes	Out
11	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
12	Lena Lake to Owl Creek	11 minutes	Containers out
13	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
14	Lena Lake to Owl Creek	11 minutes	Containers out
15	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
16	Lena Lake to Owl Creek	11 minutes	Containers out
17	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
18	Lena Lake to Owl Creek	11 minutes	Containers out
19	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
20	Lena Lake to Owl Creek	11 minutes	Containers out
21	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
22	Lena Lake to Owl Creek	11 minutes	Containers out
23	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
24	Lena Lake to Owl Creek	11 minutes	Containers out
25	Owl Creek to Lena Lake	11 minutes	1150 pounds of rotenone
26	Lena Lake to Owl Creek	11 minutes	Containers, boat, equip out
27	Owl Creek to Lena Lake	11 minutes	In
28	Lena Lake to Owl Creek	11 minutes	Personnel out
29	Owl Creek to Lena Lake	11 minutes	In
30	Lena Lake to Owl Creek	11 minutes	Personnel out
30 trips		5.5 hours	

The estimated annual noise pollution for the entire project averages 9.7 hours per year. This is believed to be an acceptable consequence for expediting the reclamation process, reducing costs, and reducing impacts to the trails and lakeshore in the wilderness complex.

10. Listing of any other local, state, or federal agency that has overlapping or additional jurisdiction:

(a) Permits:

<u>Agency Name</u>	<u>Permit</u>	<u>Date Filed/#</u>
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(b) Funding:

<u>Agency Name</u>	<u>Funding Amount</u>
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Montana Fish, Wildlife & Parks

U.S. Fish and Wildlife Service

U.S. Forest Service, Flathead National Forest

National Fish and Wildlife Foundation - Bring Back the Natives Fund

(c) Other overlapping or additional jurisdictional responsibilities:

<u>Agency Name</u>	<u>Type of Responsibility</u>
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U.S. Forest Service - administration of the wilderness area

PART II. ENVIRONMENTAL REVIEW

A. Evaluation of the Impacts of the Proposed Action Including Secondary and Cumulative Impacts on the Physical and Human Environment:

PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACTS				Can Impacts Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Soil instability or changes in geologic substructure?				x		1a.
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?				x		1b.
c. Destruction, covering, or modification of any unique geologic or physical features?		x				
d. Changes in siltation, deposition, or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?				x		1d.
e. Other:		x				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

Items 1a, 1b, and 1d:

PROPOSED: A helicopter would have no effect on the land. Provisions are underway to fit the FWP helicopter with flotation struts for landing on water.

ALTERNATIVE: Livestock would contribute greatly to the potential for soil compaction, soil erosion, and disturbance to trails and lands by virtue of high intensity use during the material transport and treatment operation. Some lakes would require more than 12 animals and multiple trips to transport the necessary equipment and personnel. Animals corralled near a lakeshore during the treatment operation will create soil compaction and other ground disturbance.

PHYSICAL ENVIRONMENT (continued)

2. <u>AIR</u> Will the proposed action result in:	IMPACTS				Can Impacts Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Emission of air pollutants or deterioration of ambient air quality?		X				
b. Creation of objectionable odors?			X			2b.
c. Alteration of air movement, moisture, or temperature patterns, or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. Other:						2e.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (Attach additional pages of narrative if needed):

Item 2b:

PROPOSED: There will be some emission of exhaust from the outboard motor in the vicinity of each project. There will be a temporary (\pm 1 day) presence of exhaust emission that is typically not associated with a wilderness area.

Item 2e:

ALTERNATIVE: Manually rowing the boat will eliminate exhaust emission, but is not an effective means of administering the treatment nor is it time efficient. Hand pumps are often used to 'spot spray' backwaters, but are not appropriate for administering in large quantities and in deep water.

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

PHYSICAL ENVIRONMENT (continued)

3. <u>WATER</u> Will the proposed action result in:	IMPACTS				Can Impacts Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Discharge into surface water or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, turbidity, or pathogens?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in the risk of contamination of surface or groundwater?		X				
i. Violation of the Montana Non Degradation Statute?		X				
j. Effects on any existing water right or reservation?		X				
k. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
l. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
m. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

Bob Marshall/Great Bear Motorized Equip. EA

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PHYSICAL ENVIRONMENT (continued)

4. <u>VEGETATION</u> Will the proposed action result in:	IMPACT				Can Impacts Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Changes in the diversity, productivity, or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?				x		4a.
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered plant species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			x		x	4e.
f. Other:		x				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation Resources (Attach additional pages of narrative if needed):

Item 4a:

PROPOSED: There is little concern with changes in density or disruption of growth of vegetation with a helicopter.

ALTERNATIVE: High densities of livestock will have noticeable and quantifiable effects on the lands. This would occur while animals are foraging, while they are confined during multiple overnight stays, and during layover days.

Item 4e:

PROPOSED: There is little risk of spreading noxious weeds while using a helicopter. A weed-free landing site may be selected outside of the wilderness to reduce the risk of spreading weeds with a helicopter.

ALTERNATIVE: Albeit limited, some potential exists for domestic livestock entering the wilderness to spread noxious weed seed only if the animal consumed the seed and/or plants prior to entering. There are provisions in place to safeguard against this by requiring certified weed-free feeds within the complex.

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

Bob Marshall/Great Bear Motorized Equip. EA

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PHYSICAL ENVIRONMENT (continued)

5. <u>FISH/WILDLIFE</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Common Index
	Unknown	None	Minor	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?		x				
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of non-game species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest, or other human activity)?			x			5g.
h. Other: _		x				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish/Wildlife Resources (Attach additional pages of narrative if needed):

Item 5g:

PROPOSED: The operational noise associated with an internal combustion engine or gas turbine engine may have an impact on game animals only in the immediate vicinity of the project. The impact is believed to be limited to the spooking of deer or elk, which may cause them to temporarily relocate during the operation. In the event that animals in the immediate vicinity relocate, it is believed that they will return over a short period of time.

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

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HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Increases in existing noise levels?			x			6a.
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:		x				

Narrative Description and Evaluation of the Cumulative and Secondary Noise/Electrical Effects (Attach additional pages of narrative if needed):

Item 6a:

PROPOSED: The use of a helicopter and outboard motor would temporarily increase noise levels during the treatment operation and is expected to affect only the direct vicinity of each lake. The protocol developed during the Whale Lake and Tom-Tom Lake projects required the helicopter to be in the project area ONLY during drop-off and pick-up trips. A cargo hook on the helicopter allows it to drop cargo rather than having to land and unload manually. The helicopter will be staged from a nearby landing zone outside the project area and therefore will not create a nuisance in the form of unnecessary noise or aesthetics. Two-way communication facilitates the stand-by readiness of the airship. The outboard motor will likewise temporarily (< 1 day) increase noise, exhaust, and odor.

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

Bob Marshall/Great Bear Motorized Equip. EA

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HUMAN ENVIRONMENT (continued)

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?			x			7a.
b. Conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?			x			7c.
d. Adverse effects on or relocation of residences?		x				
e. Other:		x				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

Item 7a:

GENERAL: The preferred time for reclaiming lakes in the Flathead area is late October when water levels are low, water temperature is cold, and public use is low. It is recognized that this time frame corresponds with the early big game hunting season. Hunters and outfitters may be contacted in advance to reduce conflicts in the project areas.

PROPOSED: Establishing scheduled interval flights for the helicopter would create only intermittent disturbance to hunters, assuming they were hunting in the area during the treatment period. Notifying hunters well in advance of the scheduled operation days could minimize conflicts. Disturbance would occur for approximately 1-2 days, depending on the lake in question.

ALTERNATIVE: In upwards of 30 days per lake would be required if livestock were used. The presence of high numbers of livestock over a 17-mile-long trail system could be viewed as highly intrusive on both hunters and prospective game animals.

Item 7c:

GENERAL: The use of motorized equipment in the wilderness area is prohibited for commercial enterprise and only allowed "...as necessary to meet the minimum requirements for the administration of the area..." as per Section 15 of Article IV of the framework document. It is believed that this project meets the identified criteria of "...rare and temporary..." and is "...truly necessary to administer the area..." under several provisions of the framework document.

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

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HUMAN ENVIRONMENT (continued)

8. <u>RISK/HEALTH HAZARDS</u>	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?	x					8a.
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. Other:		x				

Item 8a. Only in the event of a helicopter crash or otherwise catastrophic accident would jet fuel, gasoline, and/or pesticide be released in an undesignated area.

HUMAN ENVIRONMENT (continued)

9. <u>COMMUNITY IMPACT</u>	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
Will the proposed action result in:						
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		x				
b. Alteration of the social structure of a community?		x				
c. Alteration of the level or distribution of employment or community or personal income?			x			9c.
d. Changes in industrial or commercial activity?		x				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		x				
f. Other:		x				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (Attach additional pages of narrative if needed):

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

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Item 9c:

PROPOSED: Increased air traffic in the wilderness area may be of concern to backcountry hunters and outfitters. Outfitters operating in the general vicinity may be contacted well in advance in order to make the necessary adjustments to plans for use in the direct vicinity of the proposed lakes.

HUMAN ENVIRONMENT (continued)

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Have an effect upon the local or state tax base and revenues?		X				
c. Result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Result in increased used of any energy source?		X				
e. Other: _		x				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (Attach additional pages of narrative if needed):

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

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HUMAN ENVIRONMENT (continued)

11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			x			11a.
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)			x			11c.
d. Other: _		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (Attach additional pages of narrative if needed):

Items 11a and c:

PROPOSED: Helicopters are periodically used in the wilderness area for emergency evacuation, fire suppression, and fish stocking. Their presence is an alteration in the pristine aesthetics, but is considered to be "temporary," have the least impact, and necessary for the management of the area.

ALTERNATIVE: Livestock are considered common in the wilderness area. High numbers or frequent presence for extended periods of time could be viewed by other users as obtrusive and may have a negative effect on the trail network.

HUMAN ENVIRONMENT (continued)

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT				Can Impacts Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural or historic values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. Other: _		x				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (Attach additional pages of narrative if needed):

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

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SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:	IMPACT				Can Impacts Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources, which create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. Other: _	x					13f.

Narrative Description and Evaluation of the Summary Evaluation of Significance (Attach additional pages of narrative if needed):

Item 13f:

GENERAL: The use of motorized equipment in the wilderness is not uncommon. This project is proposed for an extended period to accomplish the goals and is expected to span 5 years.

PART II. ENVIRONMENTAL REVIEW (Continued)

1. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action, whenever alternatives are reasonably available and prudent to consider, and a discussion of how the alternatives would be implemented:

Alternative Solution 1 (Livestock)

The most logical scenario using livestock would involve prepacking the necessary materials over a period of time. This would require 36 trips in and out of Lena Lake, involving 444 livestock days and 612 total trail-miles traveled (Table 5). The personnel needs associated with livestock use would be 96 man-days for prepack, treatment, and pack out. Daily wages and per diem would be \$170 per person and total \$16,320. Price quotes for livestock rental from two Kalispell area outfitters was \$75 per day for each animal with tack. Based on the estimated 444 livestock days to transport the necessary equipment and personnel, the cost of using livestock for Lena Lake would be \$33,300. The total cost for livestock and labor would be \$59,620. The cost breakdown is \$448/acre for the stock and \$216/ acre for labor if stock is used.

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Table 5. Estimated travel scenario, pack time, and equipment transport necessary to chemically treat Lena Lake using livestock, assuming two packers and ten pack animals in each string.

<i>Trip</i>	<i>Destination</i>	<i>Distance</i>	<i>Man Days</i>	<i># of Animals</i>	<i>Amount of Equip</i>	<i>Materials Stored on Site</i>
1	Owl Creek trailhead to Lena Lake	17 miles	2	12	Camp and feed	Camp and feed
2	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
3	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	160
4	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
5	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	320
6	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
7	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	480
8	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
9	Owl Creek trailhead to Lena Lake	17 miles	2	12	Feed, raft, motor	Feed, raft, motor
10	Lena Lake to Owl Creek trailhead	17 miles	2	12	out	
11	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	640
12	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
13	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	800
14	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
15	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	960
16	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
17	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	1120
18	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
19	Owl Creek trailhead to Lena Lake	17 miles	2	12	160 gal of rotenone	1280
20	Lena Lake to Owl Creek trailhead	17 miles	2	12	Out	
21	Owl Creek trailhead to Lena Lake	17 miles	3	12	Equip, camp	Equip, camp
22	Lena Lake to Owl Creek trailhead	17 miles	3	12	Out	
23	Owl Creek trailhead to Lena Lake	17 miles	6	12	Feed, personnel	Feed, personnel
	Layover during treatment		6	12		
24	Lena Lake to Owl Creek trailhead	17 miles	6	12	Containers out	
25	Owl Creek trailhead to Lena Lake	17 miles	6	12	In	
26	Lena Lake to Owl Creek trailhead	17 miles	6	12	Personnel, equip out	
27	Owl Creek trailhead to Lena Lake	17 miles	2	12	In	
28	Lena Lake to Owl Creek trailhead	17 miles	2	12	Containers, camp out	
29	Owl Creek trailhead to Lena Lake	17 miles	2	12	In	
30	Lena Lake to Owl Creek trailhead	17 miles	2	12	Containers out	
31	Owl Creek trailhead to Lena Lake	17 miles	2	12	Feed in	Feed
32	Lena Lake to Owl Creek trailhead	17 miles	2	12	Containers out	
33	Owl Creek trailhead to Lena Lake	17 miles	2	12	In	
34	Lena Lake to Owl Creek trailhead	17 miles	2	12	Containers out	
35	Owl Creek trailhead to Lena Lake	17 miles	2	12	In	
36	Lena Lake to Owl Creek trailhead	17 miles	2	12	Camp, containers out	
36 trips		612 miles	96 man days	444 livestock days		

Each animal can carry 4 five-gallon containers filled with 16 gallons of rotenone. At 9.5 pounds per gallon, each pack load would be approximately 152 pounds per animal. To transport and store 1200 gallons of rotenone, 300 five-gallon containers would be required and cost approximately \$3000. Restricted use of a rigid-hull boat would require purchasing two outboard-capable, inflatable boats at \$3500 each.

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Comparisons between methods and other considerations

The savings between the proposed method of using a helicopter versus the livestock alternative for Lena Lake include 4 personnel versus 8, 2 days versus 36 days, and \$3000 versus \$60,000 (Table 6).

Table 6. Estimated cost and comparisons between helicopter and livestock transport methods necessary to treat Lena Lake.

Method	Est # of Personnel	Personnel Cost	Cost of Method	Trail Use	Misc Cost	Time In Days	Total Cost
Livestock	8	\$16,320	\$33,300	612 miles	\$3000-cont'r \$7000-rafts	36	\$59,620
Helicopter	4	\$1,400	\$1,628	< 1 mile		2	\$3,028

The greatest concern with using livestock is the risk of transporting chemical near nontarget streams that harbor federally listed bull trout. Livestock often display unpredictable behavior, which increases the risk of an accidental spill during transport. The spooking and falling of pack animals is a common occurrence. Access to all but two of the Bob Marshall lakes is made through Holland Creek pass. Because the Holland pass trail parallels and crosses Holland Creek in several locations, a chemical spill in Holland Creek would destroy its westslope cutthroat and bull trout populations.

Other concerns associated with using livestock weigh heavily on the impacts to the environment and include:

- 1) 444 animal days on the trails between Owl Creek and Lena Lake.
- 2) 612 miles of trail travel between Owl Creek and Lena Lake.
- 3) Establishing a (bearproof) campsite at Lena Lake for 36 days.
- 4) Storing equipment and chemical at Lena Lake for 36 days.
- 5) Housing packers at Lena Lake for 18 overnight stays.
- 6) Constructing a corral to hold livestock at Lena Lake for 18 overnight stays and the layover on day 24.
- 7) The cost differential is nearly 20 times more than the proposed method.
- 8) Having a presence at Lena Lake for 36 days would have a significant effect on the aesthetics of the site and would most likely exceed the preferred LAC standards.
- 9) Unimproved trails to Lick and George lakes greatly limit access with livestock.
- 10) Finally, the assumed rate of 3 lakes per year would be reduced to two lakes per year if livestock transport was the only method allowed in the wildernesses. This would extend the whole project to nearly 12 years versus 8.

Other Projects Complimentary to Proposed Alternative I

In 1994 FWP used livestock for transport to treat Devine Lake in the Bob Marshall portion of the complex to remove illegally planted brook trout. It is believed that this is a viable method of transport when treating lakes under 20 AF in volume. Pyramid Lake is the only lake that could objectively be treated using livestock because it is the smallest of those proposed, would require a small amount of rotenone to treat, there is an improved trail to it, and the access trail lies outside of a bull trout drainage.

Alternative Solution 2 (No action)

A "no action" alternative to the project will facilitate the continued contamination of genetically pure westslope cutthroat trout in the South Fork Flathead drainage. Westslope cutthroat trout are a vital component to the wilderness and contribute to its unique value. Thorough genetic contamination of native westslope cutthroat in the Bob Marshall

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Wilderness would detract from this 'value.' The South Fork Flathead River, above Hungry Horse Dam, has geographically one of the largest intact populations of westslope cutthroat trout in the nation, which must be responsibly protected. Furthermore, no action could be perceived as noncompliance to the cutthroat MOU (MFWP 1999) that FWP, among others, have mutually agreed to participate in.

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

FWP has an existing MOU with other agencies and corporate industry that commits the agency to cutthroat trout preservation (MFWP 1999) and another MOU requiring the agency to mutually develop a cooperative process to resolve management issues in the complex (USFS and FWP 1995). It is believed that FWP can meet the provisions of these MOUs while reaching the objectives of the proposed project. Likewise, it is believed that the proposed project will mutually benefit the public while ensuring the persistence of westslope cutthroat trout in the wilderness complex.

PART III. NARRATIVE EVALUATION AND COMMENT:

It is believed that the above text adequately identifies the proposal, alternatives, considerations, and concerns of each. No further evaluation or comment is required in this format.

PART IV. EA CONCLUSION SECTION:

1. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

An EIS is not required because the issue of limiting motorized equipment in the wilderness is based on a management philosophy rather than a quantifiable environmental impact. Furthermore, the framework document and subsequent MOU between the participating cooperators permit such activity if a sound argument can be made for its necessity in preserving the values of the complex. As described before, the westslope cutthroat trout contributes to the unique value of the complex.

2. Describe the level of public involvement for this project, if any; and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The following professional associations and sportsman groups have endorsed the project:

Flathead National Forest - LAC group 2000-01 Kalispell, Montana
Flathead Chapter of Trout Unlimited
Montana Chapter of the American Fisheries Society
Montana Westslope Cutthroat Trout Technical Committee

It is believed that the standard level of public involvement is appropriate, which includes legal notice, posting on FWP website, posting in local libraries, and posting at the FWP Region 1 headquarters.

Because backcountry horsemen and outfitters would be directly affected, a number of them will be solicited for comment.

3. Duration of comment period if any:

Thirty days – April 18 through May 18, 2001.

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

4. Name, title, address and phone number of the person(s) responsible for preparing the EA:

**Grant Grisak, Fisheries Biologist
Montana Fish, Wildlife & Parks
490 North Meridian Road
Kalispell, Mt. 59901
(406) 751-4541**

References cited:

MFWP, 1999. Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana. Helena.

United States Forest Service and Montana Fish, Wildlife & Parks, 1995. Fish, wildlife and habitat management framework for the Bob Marshall Wilderness complex, and MOU and Fish & Wildlife management addendum. Kalispell. Montana.

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